

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Currently Amended): A plasma generator, comprising:

a coil wound around the circumference of said cylinder;

wherein in one turn of said coil, at least two kinds of angles are formed between the winding direction of said coil and the face perpendicular to the axis of said cylinder, and a first winding region having said angle within a predetermined range and a second winding region having said angle larger than the maximum angle of said first winding region are provided.

Claim 2 (Original): The plasma generator according to claim 1, wherein said predetermined range is 1.5 degrees or less in absolute value.

Claim 3 (Original): The plasma generator according to claim 1, wherein the ratio of said first winding region in the whole circumference of said cylinder is 75% or more.

Claim 4 (Currently Amended): The plasma generator according to ~~any one of claims 1 to 3,~~
wherein the winding pitch of said coil is not less than the distance at which no discharge occurs
between the adjacent wires of said coil.

wherein the plasma of the process gas, generated in the plasma generator, is used.

